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WASATCH NATIONAL FOREST

Ranger District Multiple Use Plan

Kamas Ranger District

INTRODUCTION

The Kamas Ranger District is located on the western end of the Uinta Mountains in Summit, Wasatch, and Duchesne Counties of Utah. The gross area is 191,952 acres. There are 5,996 acres of private land within the National Forest boundary.

The principal drainages within the District are the Provo, Weber, and Duchesne Rivers. These three rivers, plus the Bear River, arise within two miles from the vicinity of Bald Mountain. Elevations are from 6500 feet near Kamas, to 12,485 feet on Hayden's Peak. Precipitation ranges from 20 to 40 inches per annum, with about 60 percent being snowfall at the higher elevations. Temperature extremes are -40° F. to +101° F. Temperatures never exceed 80 degrees at the higher elevations. Much of the District consists of steep, rugged terrain cut by many deep canyons. The terrain near and above timberline consists of open, meadow type areas ascending to the base of high rugged peaks. Drainages, and ridges or bench lands between, are generally covered with conifer timber sometimes mixed with aspen. The western end of the District contains rolling terrain covered with sagebrush, aspen, several browse plant species, some conifers, grasses, and weeds.

The resources of the Kamas Ranger District are closely associated with the major population and industrial centers of the State of Utah. Approximately seventy-five percent of the State's population, or about 740 thousand people, is located within seventy-five miles from the District over good highways. These resources are of great importance to the present economy, and to future expansion. With an estimated population increase of five percent per year in Utah, the resources importance will grow. Of greatest importance is water production on this land. Recreation, range, timber, wildlife, and minerals, all furnish products and services of inestimable and increasing values.

Access is good. Highways U.S. 40 and 189, and Utah 150, 35, and 213, all lead to or through the District. Highway 150, known as the Kamas-Mirror Lake Highway, bisects the southeastern part of the District. Most of the remaining part of the transportation system is inadequate. Many of the roads are rough and of low standard. The District is well covered with trails. Many of these are heavily used, in poor condition, and inadequately maintained. With anticipated greater use in the future, these trails must be improved and maintained to a higher standard.

Kamas Valley was first settled in 1860. During the century since settlement, the lands and resources of this District have been of major importance

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to local and adjacent economy. Forage for livestock, timber, logging, and reservoirs for water storage were some of the more important early uses of the Forest. With population increases, development of transportation facilities, and increased demand for resources and services, conflict in use resulted. Meeting these demands and pressures without proper knowledge of the limits of resources has resulted in abuse and damage. The fundamental job, therefore, is to rehabilitate damaged areas and get lands and resources into full production.

The large quantity of high quality water produced on the District is of vital importance to adjacent rural and metropolitan economy. Besides the water used for agricultural irrigation, a large volume finds its way to the Salt Lake City, Provo, and Ogden population centers. Water production is the most important resource on the District. Proper management and conservation of the water resource will, therefore, be the primary objective in managing all basic resources.

Recreation is one of the major uses of the District. Most of this is concentrated within the Water Influence Zone, but the other zones receive a proportionate share from hunting, fishing, hiking and other related uses. Recreational visitors have increased approximately one hundred percent during the past twelve years. With the estimated population increase of five percent each year in Utah, a saturation of developed recreation facilities along the Wasatch Front, and good roads leading to the District, a steady annual increase is expected. The completion of the Kamas-Mirror Lake Highway has been an important factor in the large increase in recreation use during the past few years. It will continue to play a major role in the future. Many factors lend themselves to the increasingly heavy demand for recreation areas. Among the most important of these are increased population with more "free time", improved traveling and camping facilities such as pickup campers and trailers, the advent of the improved snowmachine, and the tremendous increase in large group reservation outing requirements. New construction or improvement of existing recreation facilities on the District has made it easier to care for the large increase in recreation use.

Beginning a few years after 1900, water users from Kamas, Heber, and Utah Valleys began constructing dams to raise the water level of natural lakes for storage purposes in the Upper Provo River drainage. Later, interests in this stored water were acquired by water users in the Salt Lake Valley. About the same time,water users in northern Kamas Valley and others downstream began reservoiring lakes in the Upper Weber River drainage. A total of twenty-seven dams were constructed all within the Kamas Ranger District. Some of these reservoired lakes stored very little water, and later four were abandoned. In 1962, the latest dam to be constructed washed out, resulting in great damage to resources. Many of these lakes are so located that they offer excellent opportunity for recreation use and development. In the present condition of the dams, year-long water storage is impracticable and

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C. P. St. John — Forest Supervisor — 8/13/69 (Date)

dangerous. After water drawdown each year the lakes become unsightly and lose much of their esthetic and recreation appeal. Under the Central Utah Water Development Program, there are plans for water level stabilization and development of most of these lakes. Replacement storage will be located in other downstream areas. If these plans are realized, recreation use and values here will increase many times. They will provide areas for future recreation to care for ever increasing public need and still retain other resource values.

From the time Kamas Valley was first settled, accessible District timbered areas have been logged. Today most of the mature more desirable timbered stands have been cut over. Unfortunately, there are many areas where poor logging practices were applied and much over-cutting done. Scattered through much of these cut-over areas are stands which show satisfactory natural regeneration. The future of these stands will depend largely upon silvicultural treatment that may be applied. There are also many cut-over timber areas where regeneration is either lacking or inadequate. Management direction will be such as to obtain optimum production as correlated with other uses.

The range resource of the District has been of major importance to local economy since the area was first settled. At first, grazing was uncontrolled and much of the watershed damaged. After control was established, numerous mistakes were made which further contributed to range deterioration. Today, while progress in range management has been made, there are many problems yet to be solved.

After the time of settlement and during earlier years of the century, wildlife such as deer on the Kamas District was greatly reduced. As protective measures were applied, populations increased to an excess. Winter forage became critical. Continued heavy game harvest became necessary to reduce numbers to be more in line with winter range carrying capacity. At present, winter deer range, much of which is located on private land adjacent to the National Forest, is still in critical condition. Studies indicate the trend is still downward. Deer numbers, while greatly reduced, still appear to be in excess in line with the condition of winter range. This resource has great recreational value.

Requests for land occupancy and special uses such as summer homes, water storage reservoirs and services, are continually increasing on the District. Since this type of use is restrictive and prohibits the majority of people from getting full value from the resources, any increase of uses must be carefully considered.

Affecting timber, recreation, fire control, and watershed management of the District, are insect and disease problems in the form of the Mountain Pine Beetle and Dwarf Mistletoe. The beetle has no doubt existed in an endemic state in lodgepole pine for centuries. Periodically, they would increase

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C. P. St. John — Forest Supervisor — 8/13/69 (Date)

to epidemic proportions. In about 1930 the first of several severe epidemics to occur in recent times attached lodgepole pine stands throughout the District. Other attacks have occurred at about ten year intervals since. Large volumes of timber have been destroyed, creating additional fire hazards, killing many beautiful trees in recreation areas, and in general, impairing the watershed. Faulty logging practices where stands were highgraded and inferior or weaker trees left have contributed to the spread of Mountain Pine Beetle and Dwarf Mistletoe. Added to the beetle menace is the presence of the Dwarf Mistletoe over the District, or wherever lodgepole pine is found. This parasite has affected large areas and destroyed much valuable timber. Management direction in all situations affected by these two problems will need to be correlated with other use to obtain greater control and production.

Adjacent to the Kamas District, on private land, is a fast growing situation that presents a major problem. Numerous summer home sites are located right against National Forest Land. Approximately 2900 of these are planned or constructed around the west and north boundaries of the District. Many of these are poorly planned, and provisions for fire control, water, sanitation and other necessities lacking or inadequate. Many sites will occupy present winter deer range. Requests for special privileges on National Forest Land have been made, and more are expected. Adjacent National Forest Lands should be managed in cooperation with State and County officials to provide a harmonious land use relationship.

In 1962 a comprehensive District soil study was completed. The results of this study should be of inestimable value for making management decisions while developing the multiple use concept of resource management.

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C. R. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

Kamas Ranger District

CREST ZONE

Description

Approximately eighteen percent of the District is in this zone. Elevations range from about 9,000 to 12,000 feet. There are numerous natural lakes of various sizes, and nine reservoired lakes in this zone. Most of the lakes are fishable, but the annual drawdown of the reservoired lakes limits fish in most of them. The terrain is steep, rocky, nearly barren in many places, and the soil is generally shallow. The vegetative type is generally alpine and subalpine. Some key areas are not fully recovered from past abusive use by sheep grazing. Climatic conditions are usually severe. The lakes are scattered throughout the zone, and are generally near the heads of drainages, and near high rugged ridges and peaks. This lake-peak relationship constitutes outstanding scenic value. With the exception of the reservoired lakes the zone remains in a near-natural condition. The annual release of water leaves these lakes ugly with bare shores covered only with mud bars, stumps and deadwood debris. This robs each lake of much of its beauty during the drawdown period. The zone produces large quantities of very valuable water. Access is by the District trail system which is not always adequate. Some trails are eroding, and most of them are not suitable or safe for motorized trail vehicles. Many beautiful areas away from the main trail system do not have spur trails to them. Uses include livestock grazing, fishing, hunting, hiking, trail riding, and other forms of recreation. In isolated situations, small volumes of timber have been cut.

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C. R. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

Description (continued)

Throughout time there has been a predator-prey balance within the animal kingdom occupying the zone. For many years man has applied artificial means to upset this balance. Now the predatory animal is very limited in most species, while the prey animal has maintained its numbers or increased. The objectives are to maintain water production, esthetic values, obtain proper grazing, obtain naimal predator-prey balance, and keep recreation use properly dispersed.

General Management Decisions

1. Do not permit additional fluctuating reservoired lakes.
2. Secure adequate fish stocking of fishable lakes.
3. Stabilize soil on eroding trails.
4. Designate trails for use by motorized trail vehicles.
5. Improve trail system and construct new spurs to disperse use.
6. Develop information brochures and signing to encourage and disperse recreation use.
7. Maintain animal predator-prey balance.

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C. P. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-1 Easily Erodable Areas

Description

These units are found scattered through the Crest Zone. The soils here are steep to precipitous rocky alpine, glacial scoured subalpine rock land, and subalpine glacial moraine land. Sheet erosion has occurred on most of the units. Overgrazing has occurred in the past. Vegetation is generally sparse. These lands consist of mountain ridges, dome-like peaks, and steep precipitous cirque wall slopes. Soils are stony. The inherent erosion hazard is medium to high. These units are near or above timberline and have a low herbage productivity potential of 200 to 800 pounds per acre. There are no roads into or near these units and existing trails are inadequately maintained. New road or trail construction would accelerate erosion. Some of these lands are highly desirable for dispersed recreation, with lakes, open vegetation and scenic points. The physical nature of these units makes them subject to easy abuse and damage by grazing of domestic livestock and by motorized trail vehicle use. The objective of management is to coordinate resource use to prevent erosion.

Management Decisions

1. Control grazing and limit to grazing capacity.
2. Limit access to existing trails.
3. Maintain existing trails to specified standards.

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C. R. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-2 Potential Recreation Sites

Description

Potential recreation sites as determined by the National Forest Recreation Survey are shown on the District Functional Recreation Overlay. Additional recreation sites may be determined by future composite planning. These units are not shown on the Multiple-Use Map. They are found in three other zones. In any future resource use planning, consideration must be given to recreation use of these sites. Sites for public use should have priority over semi-public use.

Management Decisions

1. Maintain and protect site values when other resource planning is considered.
2. Develop recreation sites as the need arises by priority, and in coordination with other resource uses.

L. K. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-3 Damaged Watershed Areas

Description

These are small areas scattered through this zone and generally found near the heads of drainages, on high ridges and in passes. They are found on old sheep trails and bed grounds with past excessive grazing use. They are located near Hoyt Peak, at the head of Slate Creek, north of Castle Lake, near Big Elk Lake, and at the head of Smith Morehouse drainage. As a result of the heavy use, slight to moderate gully erosion has occurred. This erosion appears not to be accelerating. The soils on these sites are quite unstable and artificial revegetation will be very difficult and expensive. Control of livestock grazing to promote natural revegetation appears to be the most feasible and desirable means to solve this problem. Artificial methods of soil and water control should be considered later if necessary.

Management Decisions

1. Control livestock grazing.
2. Consider artificial rehabilitation.

L. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-6 Domestic Water Sources

Description

There are two domestic water sources in this zone. The Mirror Lake Campground complex water source is a spring located northwest of Emerald Lake. The Moosehorn Campground water source is a spring located about one-half mile south of Moosehorn Lake near the base of Murdock Mountain. Both sources are not far from the Water Influence Zone, and quite near to heavy recreation areas. The objective is to protect these water sources from contamination.

Management Decisions

1. Enclose immediate collection area.
2. Prevent contamination from surface runoff.
3. Prohibit unauthorized entry of collection area.
4. Meet State of Utah sanitation protection standards.
5. Coordinate immediate area use with other resource uses.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-7 Lake Country

Description

There are six of these management units totaling approximately 11,000 acres. They are located on both sides of the backbone of the Uinta Mts. from Bald Mt. on the east to Erickson Basin on the west. They contain many natural lakes, ponds, reservoired lakes, and the headwaters of several drainages. Most of the lakes and streams are fishable. Within and around these units are rugged, very scenic mountain peaks. These units are near or above timberline. Isolated patches or small fingers of commercial timber are present, but for the most part it is non-commercial. Meadows of varying sizes and other openings are scattered among the lakes, peaks, and timber. These areas were once subject to heavy grazing by domestic livestock. Grazing of domestic livestock is now very light. Future heavy grazing by recreation stock is expected. Access, at present, is limited to trails. Most of these trails are in poor condition and inadequately maintained. Portions of each unit do not have trail access. Old wagon roads used in the construction of reservoir dams are now nearly obliterated. Annual water drawdown leaves the shores of the reservoired lakes esthetically unattractive. Five of the units have reservoired lakes that are being considered for stabilization in the long-range Central Utah Water Project.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — 8/13/69 (Date)

CREST ZONE

C-7 Lake Country

Description (continued)

When stabilization is completed, there will be no more water drawdown, and public safety, fishing, and lake beauty will be improved. When the lakes are stabilized, it will be necessary to provide temporary road access for heavy equipment. These roads should be of a primitive nature, disturbing the soil and other natural features to a minimum. Most of the cleanup can be accomplished by hand tools and light equipment. There may be need for some small borrow areas. These should be carefully located to limit the impact on natural features of the area. These units are comparable to the High Uintas Primitive Area and are within reasonable reach of the visiting public. Use of the Primitive Area is steadily increasing. Litter, sanitation, and damage to trails and lake shores is becoming a serious problem. There is an evident need by the public for areas similar to the Primitive Area, with good trail access for hikers, riders and trail machines, plus limited back-country facilities. These near-natural areas could provide this need and reduce the impact on the Primitive Area. The objective is to maintain these units in a near-natural condition, with minimum facilities to reduce public use impact on the High Uintas Primitive Area.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

CREST ZONE

C-7 Lake Country

Management Decisions

1. Restrict access to trail use only.
2. Provide limited facilities for camping and sanitation.
3. Restrict timber cutting to sanitation and safety only.
4. Control all grazing and restrict to grazing capacity of areas.
5. Improve existing trails to safety standards for trail machines, and maintain to standard.
6. Provide for litter removal.
7. Construct access trails from existing trails to other parts of units.
8. Develop Information and Education program to encourage use of the unit.
9. Stabilize reservoired lakes.
10. Permit limited temporary road construction and borrow areas during stabilization.
11. Return temporary road and borrow areas to as near-natural as possible after stabilization.
12. Clean up reservoired lake drawdown and dam areas.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

INTERMEDIATE ZONE

Description

This zone comprises approximately 62 percent of the District acreage. It ranges in elevation from 7,000 to 9,500 feet. Average annual precipitation in snow and rainfall is near 30 inches. Much of the zone is cut by steep, rugged canyons where water runs either intermittently or year-long. Many soil associations, as determined by the District Soil Survey, comprise the zone. The plant cover is generally determined by soil characteristics, and moisture conditions. The inherent erosion hazard ranges from low to high. Forage production potential also ranges from low to high, with 300 to 2400 pounds per acre production. Much of the zone is quite scenic, and there are a few lakes and ponds present. The tree cover is primarily mixed species conifer. Throughout the zone may be found small areas of pure type conifer. These may be lodgepole pine or Engelmann spruce. Some mixed aspen-conifer stands may be found at the lower elevations. Many of the steep canyon sides are covered with merchantable timber which is not loggable using present logging methods. Other canyon sides or slopes are covered with unmerchantable timber, except for poles. Some grass-sedge meadows are found scattered throughout the zone, but few sagebrush-grass openings are present. Big game and many small fur bearing animals inhabit the zone. Throughout time there has been a predator-prey balance of animals occupying the zone. For many years man has applied artificial means to upset this balance. Now the

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

Description (continued)

predator is limited in most species, while the prey animal has maintained its numbers or increased. The zone contains a few species of upland game birds. Numbers of these species have remained static for many years. Occupying a small part of this zone, sometimes right next to the Lower and Water Influence Zone, but running parallel to the Mirror Lake Highway, is a natural arboretum. This arboretum contains most of the trees and shrubs native to Utah, except the desert shrubs. The exact measurements of the arboretum have not been determined. Much of the District livestock grazing is found in the zone. Following arrival of early settlers, many cattle and sheep were grazed. Much of the zone is not suitable for grazing, and many areas were badly overgrazed. Many millions of board feet of timber have been cut from the Intermediate Zone. This supplied lumber for local and urban communities, and for other industrial uses. Many areas were overcut, using poor logging practices. The remaining merchantable or harvestable timber is very limited. About one-seventh of the zone has been compartmentized for future timber management. Poorly located work roads were constructed, slash was left in stream channels, and meadows were cut up or left littered with logging debris. Numerous past bark beetle epidemics have occurred in lodgepole pine and Engelmann spruce stands. The zone contains large areas infected with dwarf mistletoe. Both mature and regeneration lodgepole pine are victims. There are other large areas of timber where

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

Description (continued)

blowdowns and snow breakage have occurred. Scattered through much of the timbered land are found numerous small meadows and wet areas. While these areas are valuable for wild game, they often have an important effect upon the time of logging. Scattered throughout the zone are recreation sites located under the National Forest Recreation Survey program. The zone receives heavy disbursed recreation use such as hunting. Access is by dirt roads and trails. These have not always been constructed properly, or maintained adequately. Some roads and trails are poorly located. Some just "grew up". Erosion on them has occurred, and in many places is still occurring. Numerous rock outcroppings, rock slides, and the general stony condition of the soil makes road and trail construction and maintenance difficult and expensive. As a watershed, the zone produces large volumes of valuable water. Objectives are to properly coordinate all zone resource uses, promote orderly use and protect from damage or destruction.

General Management Decisions

1. Stabilize soil on roads and trails, and maintain standard.
2. Prevent damage to meadows from road and trail construction and timber sale activities.
3. Maintain animal predator-prey balance.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

General Management Decisions (continued)

4. Control livestock salting and sheep bedding in meadows.
5. Manage timber resource to maintain it in healthy condition.
6. Protect and conserve species in natural arboretum.
7. Identify and sign natural arboretum.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

I-1 Livestock Control Area

Description

These units are located near the main canyon bottoms and the immediately adjacent slopes of Beaver Creek and part of the Provo River Drainage. They extend from near the western boundary of the District to beyond the North Fork of Provo River. The units may be found adjacent to the Lower and Water Influence Zones. In some places they are divided from other parts of the Intermediate Zone, and from parts of the Lower and Travel Influence Zones by a wire fence with a total length of approximately seven miles. Parts of these units are visible from the Mirror Lake Highway, but very little of the fence can be seen. These units are part of the Beaver Creek Cattle Allotment. Cattle grazing them drift back and forth from parts of the Lower and Water Influence Zones. For many years cattle grazing was concentrated season long in these and adjacent other zone units. Recreation use here has greatly increased and will continue to do so as overflow from the Water Influence Zone. The heavy vehicle traffic generated by the recreation and other uses creates a serious safety problem for people and livestock. It is prudent to control or exclude grazing during periods of heaviest public recreation use.

L F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

I-1 Livestock Control Area

Management Decisions

1. Limit grazing to "pre and post" heavy recreation season use.
2. Maintain the livestock control fence to standard.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-2 Potential Recreation Sites

Description

Potential recreation sites as determined by the National Forest Recreation Survey and shown on the District Functional Recreation Overlay. Also, additional recreation sites may be selected by future composite planning. These units are not shown on the Multiple Use Map. They are found in three other zones. As the population and demand for recreation areas increase, need to develop some of these sites may arise. Management objectives are to coordinate use and prevent damage of sites.

Management Decisions

1. Coordinate uses.
2. Protect site values.
3. Develop sites as need arises.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. B. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-3 Damaged Watershed Areas

Description

These units are located near Hoyt Peak, in Paulsin Basin and vicinity, and near the head of Slate Creek. They are generally found on steep slopes, near the heads of drainages, on high open ridges, and in passes. These areas have sustained heavy damage in the past from overgrazing, excessive trailing and bedding by sheep, and from uncontrolled prospecting and mining activities. Sheet and gully erosion has occurred on poorly located roads and in open areas. In some places this erosion is accelerating. During hunting season, when wet, hunters' vehicles cut up roads and open areas. Vegetation is sparse and depleted. The soils on these sites are quite unstable, and artificial revegetation may be difficult and expensive. An S&W project has been approved for the Hoyt Peak - Paulsin Basin area, but funds have not yet been appropriated. Mining claims to date have been declared invalid, but additional claims are always being filed. Controlled livestock grazing is necessary to improve these areas and protect them from further damage.

Management Decisions

1. Initiate S&W and revegetation projects.
2. Control livestock grazing.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-3 Damaged Watershed Areas

Management Decisions (continued)

3. Provide erosion control on roads.
4. Investigate valid and invalid mining claim activity.
5. Curtail unauthorized or unnecessary mining activity.
6. Discourage vehicle use.

L. K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-4 Completed S&W Projects

Description

These projects have been completed and are reasonably successful. They are the Mud Flat - Shingle Mill Flat Project covering approximately 800 acres and completed in 1960, and the Silks Basin - Slader Ridge Project covering approximately 400 acres and completed in 1961-62. Before these projects were started, the areas were recognized as prime flood sources. Moderate to severe erosion was present. Heavy past grazing, sheep trailing and bedding had almost completely destroyed plant cover. Some eroded soils were incapable of supporting high quality vegetation. Contour trenching, plowing, gully plugging and seeding were completed on these projects. Artificial seedlings have been established, natural revegetation is progressing, and erosion has been retarded or stopped. Intensive management and protection from domestic grazing should continue to eventually eliminate erosion and completely restore vegetation. When this is accomplished, then controlled grazing can be reestablished.

Management Decisions

1. Control and coordinate livestock grazing with rehabilitation.
2. Continue annual studies to determine success of rehabilitation.
3. After success and approval, reestablish grazing.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-5 Snow Courses

Description

There are two of these units in the zone. They are located near Trial Lake and in Paulsin Basin. These courses were established many years ago, and have been measured several times each year, first by the Forest Service and now by the Soil Conservation Service. These measurements provide valuable data for forecasting seasonal water production and for historical purposes. These units are located in meadows or other open, rather flat areas generally surrounded by various species of shrubs and trees. These areas are chosen where snow has little tendency to drift. The management objective is to maintain these units in a condition that will insure continuing snowfall measurements and long term studies.

Management Decisions

1. Manage shrub and tree removal so as not to impair site values.
2. Prohibit recreation or administrative facility construction on or immediately adjacent to courses.
3. Protect from vandalism and destruction.
4. Maintain an orderly, forested appearance.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-6 Domestic Water Sources

Description

These are spring sources which provide domestic water for an off Forest summer home site, on Forest recreation home site, and public campgrounds. They supply thousands of people with domestic water during the summer or outdoor vacation season. Most of these units are within cattle or sheep grazing allotments. All are near or accessible from highway or heavy public use areas. All are in or near stream channels and subject to some form of water runoff. Developed campground water sources are checked bi-weekly during the recreation season for contamination. The management objective is to protect these water sources from contamination.

Management Decisions

1. Enclose immediate collection areas.
2. Prevent contamination from surface runoff.
3. Prohibit unauthorized entry of collection area.
4. Meet State of Utah sanitation protection standards.
5. Coordinate immediate area use with other resource uses.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-7 Lake Country

Description

There is only one of these units in the Intermediate Zone. This unit consists of about 600 acres surrounding Meadow Lake in the headwaters of the Weber River. Numerous small lakes, ponds, and meadows are within the unit. The areas within and surrounding the unit are very rugged and scenic. Meadow Lake is reservoired and is subject to annual drawdown. It is fishable, but fishing is limited by the drawdown. The drawdown area and immediate vicinity is ugly with mud bars, stumps and dead timber debris. Some patches of commercial timber are within the area, but most of the timber is isolated and uneconomical to harvest. A timber sale is planned to the east of the unit, if coordination can be worked out. Access to Meadow Lake is by trails. Portions of the trails are poorly constructed and inadequately maintained. Access to the rest of the area is limited to cross-country. Meadow Lake is being considered for stabilization in the long-range Central Utah Water Project. When stabilization is completed, there will be no more water drawdown, and safety, better fishing, and most of the lake beauty will be restored. When the lake is stabilized, it will be necessary to provide temporary road access for heavy equipment. This road should be very primitive, disturbing the soil and other natural

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-7 Lake Country

Description (continued)

features to a minimum. Most of the cleanup can be accomplished by hand tools and light equipment. There may be need for some small borrow areas. These should be carefully located to limit impact on natural features of the area. This unit is comparable to the High Uintas Primitive Area, and is within reasonable reach of the visiting public. Use of the Primitive Area is steadily increasing. Litter, sanitation, and damage to trails and lake shores is becoming a serious problem. There is evident need by the public for similar areas to the Primitive Area, with good trail access for hikders, riders, and trail machines, plus limited back-country facilities. This natural area could provide part of this need and reduce the impact on the Primitive Area. The objective is to maintain this unit in a near-natural condition with minimum facilities so as to reduce the public use impact on the High Uintas Primitive Area.

Management Decisions

1. Restrict access to trails only.
2. Provide limited facilities for camping and sanitation.
3. Restrict timber cutting to sanitation and safety only.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

E. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-7 Lake Country

Management Decisions (continued)

4. Improve existing trails to safety standards for trail machines.
5. Provide for litter removal.
6. Construct access from existing trails to other parts of unit.
7. Develop I&E to encourage use of unit and sign.
8. Stabilize reservoired lake.
9. Before stabilization, permit limited temporary road construction, and borrow areas.
10. After stabilization, return temporary road and borrow areas to as near-natural as possible.
11. Clean up reservoired lake drawdown and dam areas.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-8 Foreground Areas

Description

These units are near overlooks and other attraction points along the Mirror Lake Highway. They are seen by many people from the Water Influence Zone. These points of interest invite the viewing public to stop for longer scrutiny. Their esthetic value is high, and they provide very scenic and informational enjoyment. Fire hazard is increasing with stepped-up public use. Because of visitor scrutiny, these units are key to public opinion. How resources are used, and the amount, condition and location of any residue from these uses have a direct bearing on public attitude and opinion. The management objective is to retain a near-natural environmental atmosphere, or be able to satisfactorily explain changes.

Management Decisions

1. Require high standard maintenance and cleanup.
2. Manage timber for esthetics and safety.
3. Prohibit road and building construction.
4. Protect and enhance all ground cover, including plants and soil and rock formation.
5. Permit trail construction when needed and when it blends with the landscape.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. H. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-8 Foreground Areas

Management Decisions (continued)

6. Provide I&E signing in and adjacent to units.

7. Coordinate all resource uses.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-9 Back Drops

Description

These are commercial timber stands near to, and visible from, the Mirror Lake Highway. These units are visible by large numbers of the visiting public from the Water Influence Zone. The areas are often on steep canyon walls. Access for recreational purposes is often possible by the public, and use is increasing. Esthetic values are high. Fire hazard is increasing with stepped-up public use. Some overlooks and foreground areas are located adjacent to, or near, these units. The management objective is close coordination in all resource planning and use to maintain esthetic values.

Management Decisions

1. Orient, design, and limit size of cutting units to blend with topography and maintain forested appearance.
2. Encourage selective cutting where possible.
3. Locate and design temporary logging roads and landings to minimize visual impact from Water Influence Zone.
4. Close roads to vehicle use, control erosion, and restore to near-natural condition.
5. Design access to highway with emphasis on public safety.
6. Assure one hundred percent slash disposal.
7. Plant cutover area when natural regeneration is inadequate.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-10 Special Commercial Timber Areas

Description

These units are areas of mature or overmature commercial timber covering several hundred acres each. They are all adjacent to the Water Influence Zone, and some of them are also adjacent to either the Crest or Special Zones. Parts of all units can be seen from the Mirror Lake Highway. The viewing distance ranges from about one-fourth mile to four miles. These areas are located in the vicinity of heavy recreation use centers of Trial and Mirror Lakes. Many fishable, natural and reservoired lakes are near these units. All the reservoired lakes are scheduled for stabilization under the Central Utah Project. Together they form highly desirable present and future recreation development complexes. Scattered throughout the units are attractive small meadows and other openings. Small streams cut most units. These areas are very valuable watershed and produce large volumes of water annually. Since this timber is mostly mature and overmature lodgepole pine and Engelmann spruce, it is subject to insect and disease attack. There is a past history of bark beetle epidemics in both the pine and spruce. Dwarf mistletoe infects much of the lodgepole pine. Access to parts of the units is by primitive trail. Remnants of old timber access or work roads lead to some unit edges. There is no access through most of the

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-10 Special Commercial Timber Areas

Description (continued)

units. Roads and trails found in the adjacent Water Influence Zone provide access to some unit edges. The surrounding country is very scenic. None of these units is included in domestic livestock grazing allotments. Grazing by recreation stock is found near the more heavily public used areas. The management objective is to coordinate all uses to obtain the highest values in public service without destroying basic National Forest resources.

Management Decisions

1. Plan and develop recreation area complexes.
2. Permit sanitation and safety timber harvest only near or around recreation complexes.
3. Construct access and work roads considering public safety, erosion control, and esthetics.
4. Harvest timber away from recreation complexes using selective or block systems.
5. Require careful timber sale planning in selective or block cutting, emphasizing safety, erosion control, and esthetics in block selection size, shape and location.
6. Require rigid compliance with timber sale contract requirements.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

1-10 Special Commercial Timber Areas

Management Decisions (continued)

7. Treat all timber sale slash and other debris for hazard reduction and esthetic purposes.
8. Secure adequate regeneration.
9. Close, obliterate and regenerate all work roads as completely as possible.
10. Control all livestock grazing and limit to grazing capacity.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

INTERMEDIATE ZONE

I-11 Ecological Study Area

Description

This is a single unit located near Lily Lakes west of Trial Lake. It consists of three small bog lakes set aside as a study area for ecological research. While this unit is covered by a Special Use Permit issued to Brigham Young University, additional coordination is desirable. This is a valuable study of various forbs and grasses in natural condition. Other developments, or excessive public use, could seriously damage this unit and alter or destroy its research value. The management objective, then, is to protect the area to maintain its natural condition.

Management Decisions

1. Prevent unit from damage.
2. Avoid road or trail construction in or around the unit.
3. Cooperate with Brigham Young University to protect site.
4. Obtain study results, when available, for historical or ecological purposes.
5. Coordinate all resource uses in immediately adjacent areas.

K. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

LOWER ZONE

Description

This zone comprises approximately eight percent of the District acreage. It ranges in elevation from about 6,500 to 8,000 feet. Average annual precipitation is near 20 inches. Much of this zone is located on rather steep rolling foothills above and adjacent to the valley floor. These foothills are cut by several deep canyons. There are eight soil associations found in this zone as determined by the District Soil Survey. These are areas G,H,K,L,M,J and to a lesser degree, I and N, as described in the Soil Survey. The herbage productivity potential ranges from moderately low to moderately high. Inherent erosion hazard is primarily medium. Wintering deer share much of this zone with adjoining private land. Game winter forage plants on much of this zone have been reduced, and those remaining are in poor condition through excessive past use. Numerous summer homes are planned and being constructed on private land adjacent to this zone. This occupancy is having a decided influence on management of National Forest resources adjacent to them. Throughout time there has been a predator-prey balance within the animal kingdom occupying the zone. Included in the predator animals are the coyote, bobcat, weasel, badger, mountain lion, and skunk. Included in the prey animals are the deer, gopher, mouse, rat ground squirrel, rabbit, chipmunk, and marmot. For many years man has applied artificial means to upset the predator-prey

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

Description (continued)

balance. Now the predator is limited in most species, while the prey animal has maintained its numbers or increased. The zone contains a few species of upland game birds. Numbers of these species have remained static for many years. Occupying part of this zone, and running parallel to the Mirror Lake Highway, is a natural arboretum which contains most of the trees and shrubs native to Utah, except the desert shrubs. That part of the arboretum found in this zone is about two miles wide and approximately eight miles long. The exact measurements have not been determined. Access within the Lower Zone is by dirt roads and trails. Some of these just "grew up" or were poorly constructed. Most roads and trails have never been adequately maintained, and are generally in poor condition with erosion present. The management objective for the zone is to obtain proper use and coordination of all resources.

General Management Decisions

1. Cooperate with Utah Fish and Game Department in maintaining proper level of deer numbers.
2. Regenerate winter game range.
3. Stabilize soil on roads and trails and maintain to standard.
4. Maintain animal predator-prey balance.
5. Protect and conserve natural arboretum.
6. Identify and sign natural arboretum.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-1 Livestock Control Areas

Description

These units are located in the main canyon bottoms and the immediately adjacent slopes of Beaver Creek, and part of Provo River Drainage. They extend from near the western boundary of the District to slightly beyond the North Fork of Provo River. The units are generally adjacent to the Water Influence Zone, and are divided from other parts of the Lower Zone by wire fence approximately seven miles long. Much of these units is visible from the Mirror Lake Highway, but only a very small part of the fence can be seen from the highway. These units are part of the Beaver Creek Cattle Allotment, and cattle grazing them drift back and forth from the Water Influence Zone. For many years cattle grazing was concentrated season-long in these and adjacent other zone units. Recreation use here has greatly increased and will continue to do so as overflow from the Water and Travel Influence Zones. The heavy vehicle traffic generated by the recreation and other uses creates a serious safety problem for people and livestock. It has become prudent to control or exclude grazing during periods of heaviest public recreation use.

Management Decisions

1. Limit grazing to "pre and post" heavy recreation season use.
2. Maintain the livestock control fence to standard.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-2 Potential Recreation Sites

Description

Potential recreation sites as determined by the National Forest Recreation Survey are shown on the District Functional Recreation Overlay. Additional recreation sites may be selected by future composite planning. These units are not shown on the Multiple Use Map. They are found in three other zones. Those in the Lower Zone are situated nearer to population centers and are free from snow longer than in other zones. The need for earlier and later seasonal recreation facilities is growing. Management objective is to coordinate use and prevent damage of sites.

Management Decisions

1. Coordinate uses.
2. Protect site values.
3. Develop sites as need arises.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C.R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-3 Proposed Reservoir and Dam Site

Description

This site is located just within the National Forest Boundary beginning at the narrows on Beaver Creek. It is astride the Mirror Lake Highway. While the dam site and part of the reservoir site are in the Water Influence Zone, the rest of the reservoir site is in the Lower Zone. Decisions affecting one affect the other. Plans for construction of this dam were prepared many years ago, but an application for a permit to construct was no presented until 1961. The permit was denied at that time. Construction of a dam with a water fluctuating reservoir will create an unsightly condition and impair esthetic values. According to highway engineers, the cost of realigning at least a mile of highway, much of it in the Lower Zone, would be economically excessive and unrealistic. The number of people and land benefitting from a dam and reservoir here would be comparatively small. In view of these conditions, the objective is to discourage construction of the dam and reservoir. If, however, a future feasibility study should determine this dam and reservoir can and should be constructed, it will be necessary to require adequate controls for safety, esthetics, fishing and other recreation.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-3 Proposed Reservoir and Dam Site

Management Decisions

1. Discourage construction of dam.
2. Require study to determine construction feasibility.
3. If study reveals dam is feasible:
   a. Dispose of all construction debris.
   b. Locate borrow areas invisible from highway.
   c. Screen highway from reservoir.
   d. Avoid excessive highway construction cuts and fills.
   e. Revegetate all areas denuded during construction.
   f. Provide for public safety.
   g. Develop parking, sanitation, and other recreation facilities.
   h. Require minimum water drawdown.
   i. Seed drawdown area with water resistant grasses.
   j. Provide minimum fishery pool.
   k. Maintain reservoir area to acceptable standards.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-4 Ponderosa Pine Plantation

Description

In 1912 the Forest Service established a tree nursery on Beaver Creek. Many native and exotic species of conifer trees were grown in the nursery for distribution throughout the region. The nursery was closed in 1918. During the period the nursery was in operation, several areas in the Beaver Creek drainage were planted with a variety of species of conifer. Only two known plantings survived and they are ponderosa pine. One of these is located in the Lower Zone. It is about two acres in size and can be found just within the Forest Boundary on the north side of Beaver Creek, and about one thousand feet west of the Mirror Lake Highway. Native ponderosa pine is found, sparsely only, in Beaver Creek and on parts of Provo River drainage. Soil and microclimate appear to govern the native existence or planting survival of the species. This would explain why only these two plantations survived. Observations indicate the plantation is thrifty, growing rapidly, and is esthetically pleasing. Because of the historic and future educational value of this stand, it should be protected and preserved.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-4 Ponderosa Pine Plantation

Management Decisions

1. Treat as necessary to maintain a healthy stand.
2. Protect from fire, insect, disease, animal, or other forms of destruction.
3. Prevent camping or similar public use.
4. Encourage study and evaluation.
5. Develop I&E signing and display.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-5 Big Game Browse Transects

Description

These transects are located near the mouth of Pinon Canyon, north and east of the Utah State Fish Hatchery, in Beaver Creek, and north and east of the mouth of Riley's Canyon. All are near private land. The Pinon Canyon and Beaver Creek transects measure mountain mahogany, while that near Riley's Canyon measures oakbrush. These transects were established in 1962. Before this, Forest and Utah State Fish and Game Officers cooperated in studying transects nearer to the highway in Beaver Creek. Additional scattered transects seemed necessary to obtain a more representative measurement of winter deer forage. Forest and State Officers are continuing to cooperate in these studies. The transects measure annual growth and deer grazing utilization, and are read in the spring and fall. Data collected are used for management purposes such as determining carrying capacity, distribution, and annual deer kill. These data are very important since this herd unit receives second to the highest hunting pressure in the state. Also, this herd is considered one of the most stable. Present development of private land adjacent to the National Forest is threatening the winter deer range.

L. K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/12/69 (Date)

LOWER ZONE

L-5 Big Game Browse Transects

Description (continued)

This has the effect of narrowing or limiting the range. Proper trend studies are, therefore, very important. The objective, then, is to protect these transects.

Management Decisions

1. Coordinate with other resource activity.
2. Prevent damage to transects by the public.
3. Identify, sign and explain purpose of transects.
4. Cooperate with Utah State Fish and Game in collection of data.

L.J. Coltons — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-6 Domestic Water Source

Description

There is one of these units in the Lower Zone. It supplies water for the Pine Valley Group and Lower Provo Campgrounds. It is located westerly from both campgrounds. This unit is within a cattle grazing allotment and subject to snow-melt and surface water runoff. It is not far from the Water Influence Zone, and near heavy recreation use areas. The management objective is to protect this water source from contamination.

Management Decisions

1. Enclose immediate collection area.
2. Prevent contamination from surface runoff.
3. Prohibit unauthorized entry of collection area.
4. Meet State of Utah sanitation standards.
5. Coordinate immediate area use with other resource uses.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

LOWER ZONE

L-7 Municipal Water Sources

Description

There are two municipal water sources in this zone. The sources are springs. The Oakley Town water source is located in Pinon Canyon, Kamas Town in Left Hand Fork of Beaver Creek, and Pine Valley - Lower Provo Campgrounds on the hillside west of them. The source for the communities is used year around, while the campground source use is seasonal. The Kamas Town and the campground sources are within the Beaver Creek Cattle Allotment. All three are within reach of the public. All are subject to annual snow and water runoff. The management objective is to protect these water sources from destruction and contamination.

Management Decisions

1. Cooperate with municipalities in meeting State sanitation standards.
2. Coordinate immediate area with other uses.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE
ZONE

WATER INFLUENCE ZONE

Description

This zone comprises approximately five percent of the District. Elevations range from 6,700 to 11,000 feet. Annual precipitation ranges from 20 to 40 inches. In places this zone borders all other zones. The lands that comprise the major part of the zone are Soil Association Management Areas C and N as determined by the Kamas District Soil Survey. Other soil associations are found, but are very minor. The C Associations are Subalpine Glacial Moraine Lands, and the N Associations are Alluvial Lands. These soils vary from poorly drained to excessively drained. The inherent erosion hazard is medium. Herbage productivity potential ranges from 400 lbs. per acre to 3,000 lbs. per acre, or from medium low to high. Tree productivity potential also ranges from medium low to high. The productivity potential for both herbage and trees depends on the kind of soil, drainage, and elevation. The percolation capacities of the soil mantles in this zone are quite high, and large quantities of ground water are furnished to the streams. Water drainages found here make major contributions to Utah's agriculture and industry, as well as for domestic purposes. This zone is generally found in deep, steep walled canyons, where roads follow streams, and near meadows and lakes. It is very scenic. Most of the District's recreation developments are found in this zone. Future use and influence will increase with the expansion of population and related industry.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

Description (continued)

Seventy-five percent of Utah's population is located within seventy-five miles, and as a result the zone receives very heavy public use. Some dirt or gravel roads and parts of District trails or heads are located within the zone. These receive heavy use. Along the Mirror Lake Highway from the west Forest Boundary, then east for about eight miles within the Water Influence Zone, is a natural arboretum. This arboretum also occupies parts of the Lower and Intermediate Zones. It contains most of the trees and shrubs native to Utah, except the desert shrubs. Its exact dimensions have not been determined. Some grass-sedge meadows are scattered through the zone. A few sagebrush-grass openings are present. Most of the streams and lakes are fishable and are regularly stocked. Big game and many small fur bearing animals inhabit the zone. Throughout time there has been a predator-prey balance of animals occupying the zone. For many years man has applied artificial means to upset this balance. Now, the predator is limited in most species, while the prey animal has maintained its numbers, or increased. The zone contains a few species of upland game birds. The total number is limited. Scattered through the zone are narrow strips or patches of commercial timber, most of which would be uneconomical to harvest. Numerous bark beetle and disease attacks have occurred during the past. This timber has great esthetic and watershed value. That part of the zone on Provo River, from the Duchesne Tunnel to the Forest Boundary, has received heavy erosion damage from flood

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

Description (continued)

waters. This damage is continuing, and has received Regional consideration. It is included in a management unit. The management objective for the zone is to obtain proper use and coordination of all resources resulting in adequate protection of National Forest Land values.

General Management Decisions

1. Stabilize soil on roads and trails, and maintain to standard.
2. Maintain animal predator-prey balance.
3. Control tree insect and disease.
4. Protect and conserve species in natural arboretum.
5. Identify and sign natural arboretum.
6. Prevent livestock salting and bedding in meadows and developed campgrounds.
7. Cooperatively work toward securing adequate fish stocking of fishable streams and lakes.
8. Design recreation and occupancy improvements to protect the site and reduce impact.
9. Preservation or enhancement of natural beauty will be a prime consideration in all management activities.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--d

WATER INFLUENCE ZONE

W-1 Wet Meadows Adjacent to Mirror Lake Highway

Description

There are three of these units. They are located near Cold Springs south of Bald Mt. Overlook immediately south of the highway; one-fourth mile south of Moosehorn Lake and directly east of the highway; one-fourth mile south of the Camp Steiner road junction. These meadows are immediately adjacent to the Mirror Lake Highway, and are easily accessible to public vehicle use. Early in the season after snow-melt, following heavy summer rainfall and after the first snowfall, these meadows become very wet and soft. In the past, part of them have sustained heavy damage by motorized equipment. Plant life has been destroyed and erosion started. Management objectives are to prevent further damage and erosion.

Management Decisions

1. Control motor vehicle access.
2. Control and repair erosion damage.
3. Revegetate bare and eroded areas.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--e

WATER INFLUENCE ZONE

W-2 Potential Recreation Sites

Description

Potential recreation sites as determined by the National Forest Recreation Survey, and shown on the District Functional Recreation Overlay. Also, additional recreation sites as may be determined by future composite planning. These units are not shown on the Multiple Use Map. They are found in three other zones. Those in the Water Influence Zone are easier accessible, and development may be considered first. Management objective is to coordinate use and prevent damage of sites.

Management Decisions

1. Coordinate uses.
2. Protect site values.
3. Develop sites as need arises.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--f

WATER INFLUENCE ZONE

W-3 Proposed Reservoir and Dam Site

Description

This site is located just within the National Forest Boundary beginning at the narrows on Beaver Creek. It is astride the Mirror Lake Highway. The dam site and part of the reservoir site are in the Water Influence Zone, but the rest of the reservoir site is in the Lower Zone. Decisions affecting one zone affects the other. Plans for construction of this dam were prepared many years ago, but an application for permit to construct was not presented until 1961. The permit was denied at that time. Construction of a dam with a water fluctuating reservoir will create an unsightly condition and impair esthetic values. According to highway engineers, the cost of realigning at least a mile of highway, located in both the Water Influence and Lower Zones, would be economically excessive and unrealistic. If constructed, the reservoir could inundate the large Yellow Pine Campground. The number of people and land benefitting from a dam and reservoir, here, would be comparatively small. In view of these conditions, the objective is to discourage construction of the dam and reservoir. If, however, a future feasibility study should determine this dam and reservoir can be constructed, and the proponents insist, it will be necessary to require adequate controls for safety, esthetics, fishing and other recreation.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-3 Proposed Reservoir and Dam Site

Management Decisions

1. Discourage construction of dam.
2. Require study to determine construction feasibility.
3. If study shows construction feasible, consider the following:
   a. Dispose of all construction debris.
   b. Locate borrow areas invisible from the highway.
   c. Screen highway from reservoir.
   d. Avoid excessive highway cuts and fills.
   e. Revegetate all areas denuded during construction.
   f. Provide for public safety.
   g. Develop parking, sanitation and other recreation facilities.
   h. Require minimum water drawdown.
   i. Seed drawdown area with water resistant grasses.
   j. Provide minimum fishery pool.
   k. Maintain reservoir area to acceptable standards.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C.P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-4 Ponderosa Pine Plantation

Description

In 1912 the Forest Service established a tree nursery on Beaver Creek. Many native and exotic species of conifer trees were grown in the nursery for distribution throughout the Region. The nursery was closed in 1918. During the period the nursery was in operation, several areas in the Beaver Creek drainage were planted with a variety of species of conifer. Only two known plantings survived and they were ponderosa pine. One of these is located in the Water Influence Zone. It is about one acre in size and is located near the Mirror Lake Highway, just beyond the narrows on Beaver Creek. The area is between Upper Samak and Slate Creek. Native ponderosa is found, sparsely only, in Beaver Creek and parts of Provo River drainage. Soil and microclimate appear to govern the native existence or planting survival of the species. This would explain why only two plantations survived. Observations indicate the plantation is thrifty, growing rapidly, and is esthetically pleasing. Because of the historical and educational value of this stand, it should be protected and preserved.

Management Decisions

1. Treat as necessary to maintain a healthy stand.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-4 Ponderosa Pine Plantation

Management Decisions (continued)

2. Protect from fire, insect, disease, animal, or other forms of destruction.
3. Prevent camping or similar public use.
4. Encourage study and evaluation.
5. Develop I&E signing and display.

L F. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-5 Stream and Precipitation Gauging Stations and Snow Courses

Description

The stream and precipitation gauging stations have been established by the U. S. Bureaus of Reclamation and Geological Survey under memorandums of agreement with the Forest Service. They are located near the outlet of Trial Lake, the West Portal of the Duchesne Tunnel, on the North Fork of Provo River, and on Shingle Creek near the divide between the Provo and Weber River drainages. These stations consist of various water measuring devices, instrument housing, and stream crossing cableways. They were established for research and streamflow measuring purposes. Snow measurement courses located near Soapstone and Beaver Creek Administrative Sites were established by the Forest Service many years ago, and are now measured by the Soil Conservation Service. These courses are measured several times each year. They provide valuable water production volume data. Accumulation of this data provides an excellent means for forecasting seasonal water production. The snow courses are located in open, rather flat areas, surrounded by various species of trees and shrubs. Snow has little tendency to drift here. Most of these gauging and snow measuring units are in livestock grazing allotments and near heavy public travel and recreation use. The management objective is to maintain these units in a condition that will insure continuing measurements and long term studies.

K. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-5 Stream and Precipitation Gauging Stations and Snow Courses

Management Decisions

1. Manage shrub and tree removal so as not to impair site values.
2. Prohibit recreation or administrative facility construction on or immediately adjacent to the units.
3. Protect from vandalism and destruction.
4. Maintain an orderly, forested appearance.

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-6 Domestic Water Sources

Description

There are five domestic water sources in this zone. Beaver Creek and Weber Cottonwood Campgrounds are supplied by deep wells. Smith Morehouse and Cobblerest Campgrounds water sources are nearby springs. Yellow Pine Campground water is taken directly from Yellow Pine Creek and chlorinated. All but Weber Cottonwood are within grazing allotments. Since all these units are within the Water Influence Zone, they are near heavy public travel and recreation use. The management objective is to protect these water sources from contamination.

Management Decisions

1. Enclose immediate collection area, except for the wells.
2. Prevent contamination from surface runoff.
3. Prevent unauthorized entry of collection areas, except for the wells.
4. Meet State of Utah sanitation protection standards.
5. Coordinate immediate area use with other resource uses.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--m

WATER INFLUENCE ZONE

W-7 Lake Country

Description

The area around and adjacent to the lakes at the headwaters of the North Fork of Provo River is near-natural and can be managed with minimum development. Long, Marjorie, Pot, Weir, Duck, Fire and Island Lakes, are within the area. All of these are reservoired. Small ponds and meadows are found throughout the area. Around the unit are rugged and very scenic mountain peaks. Patches or fingers of commercial timber are present. This unit was once subject to heavy grazing by domestic livestock. This type of grazing is now very light. Future heavy grazing by recreation stock is expected. All of the lakes and major streams draining them are fishable and receive quite heavy use. Access, at present, is limited to trails. Most of these trails are in poor condition and inadequately maintained. Old wagon roads used in the construction of reservoir dams are now nearly obliterated. Annual water drawdown leaves the shores and dam areas of the reservoired lakes ugly with mud bars, stumps, and deadwood debris. All of these lakes are being considered for stabilization in the long range Central Utah Water Project. When stabilized, there will be no more water drawdown, and public safety, fishing, and lake beauty will be improved. When the lakes are stabilized, it may be necessary to provide temporary road access for heavy

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-7 Lake Country

Description (continued)

equipment. Some lakes might be stabilized without heavy equipment. These roads should be of a primitive nature, disturbing the soil and other natural features to a minimum. Most of the cleanup can be accomplished by hand tools and light equipment. There may be need for small soil borrow areas. These should be carefully located to limit the impact on natural features of the area. This unit is comparable to parts of the High Uintas Primitive Area and is within reasonable reach of the visiting public. Use of the Primitive Area is steadily increasing. Litter, sanitation, and damage to trails and lake shores are becoming serious problems. There is evident need by the public for areas similar to the Primitive Area, with good trail access for hikders, riders and trail machines, plus limited back-country facilities. This near-natural area could help provide this need and reduce the impact on the High Uintas Primitive Area. The objective is to maintain this unit in a near-natural condition, with minimum facilities to help reduce public use impact on the High Uintas Primitive Area.

Management Decisions

1. Restrict access to trail use only.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-7 Lake Country

Management Decisions (continued)

2. Provide limited facilities for camping and sanitation.
3. Restrict timber cutting to sanitation and safety only.
4. Control all grazing and restrict to grazing capacity of area.
5. Improve existing trails to safety standards for trail machines and maintain to standard.
6. Provide for litter removal.
7. Develop an I&E signing program to encourage use of the unit.
8. Stabilize reservoired lakes.
9. Permit limited temporary road construction and borrow areas during stabilization.
10. Return temporary road and borrow areas to as near-natural condition as possible after stabilization.
11. Clean up reservoired lake drawdown and dam areas.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-8 Foreground Areas

Description

These units consist of areas immediately adjacent to overlooks and other attraction points in the Water Influence Zone along the Mirror Lake Highway. They invite the viewing public to longer scrutiny. Their esthetic value is high and they provide very scenic and informational enjoyment. Fire hazard is increasing with stepped-up public use. Because of heavy use and longer visitor scrutiny, these units are key to public opinion. How resources are used and the amount, condition and location of any residue from these uses, have a direct bearing on public attitude and opinion. The management objective is to retain a near-natural environmental atmosphere, or be able to satisfactorily explain changes.

Management Decisions

1. Require high standard maintenance and cleanup.
2. Manage timber for esthetics and safety.
3. Prohibit construction activities.
4. Protect and enhance all ground cover, including plants and soil and rock formation.
5. Provide I&E signing in and adjacent to units.
6. Coordinate all resource uses.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-9 Duchesne Tunnel - West Portal

Description

This unit is located adjacent to the Mirror Lake Highway. It consists of the Duchesne Tunnel West Portal, the tunnel outlet channel, the recently constructed overlook, and the tunnel waste disposal site. All are closely grouped, but cover several acres. The tunnel was constructed under the direction of the Bureau of Reclamation to divert highwater runoff from the Duchesne River drainage to Provo River. Construction of the six mile tunnel was completed in 1952, and has a capacity of six hundred second feet. Prior to reconstruction of the Mirror Lake Highway, the public paid little attention to the tunnel portal, the outlet channel, and the waste area. With the great increase in public use over the new highway, the area attracted many visitors. With only a steep bank from which to view the tunnel portal and outlet, public safety became an important problem. The present overlook for viewing was recently constructed with safety and informational features. Since there were no esthetic requirements for disposal of the tunnel waste, it was dumped near the portal and alongside the outlet channel. It became an ugly eyesore and detracts from the scenic beauty of the area. Most of the waste can be seen from the overlook and highway. Some conifer, grass, and herb regeneration has taken place, but most of it is bare of plant life. Part of the

L. F. Colton — District Forest Ranger — 8/1/69 (Date)

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WATER INFLUENCE ZONE

W-9 Duchesne Tunnel - West Portal

Description (continued)

tunnel portal area is fenced off with a dilapidated wire fence and shaky metal gate. While vehicle entrance is barred, foot travelers can enter the area without difficulty. Administration of the area is difficult, since the outlet is controlled by the Provo River Water Users, and the waste area is under Bureau of Reclamation jurisdiction. The management objectives are to provide public safety, minimize impact of the ugly waste area, and provide informational signing.

Management Decisions

1. Adequately maintain overlook and informational signing.
2. Require old fence and gate replacement for esthetics and public safety.
3. Break up sharp line of waste area.
4. Plant waste area with conifer seedlings and shrubs.
5. Secure ownership management of waste area.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-10 Duchesne Tunnel Housing

Description

This unit is located north of the Mirror Lake Highway near the West Portal of Duchesne Tunnel. It consists of four medium sized dwellings and related parking and outbuildings. These buildings were part of a larger compound used during construction of the tunnel. Three dwellings were purchased from the Bureau of Reclamation by the Forest Service. The fourth is owned and maintained by the Provo River Water Users under an agreement with the Bureau. The Forest Service buildings are reached by a short loop road and are partially screened from the highway by trees and shrubs. The Provo River Water Users building is slightly above and near the highway. No access road or screening is present. The west Forest Service building is used as a recreation guard station. The other two buildings are used intermittently as quarters for Forest Service crews or families of crew members. The area has not been landscaped and presents a primitive, somewhat unattractive view to visitors. While Forest Service buildings are maintained, that of the Provo River Water Users is not. The management objective is to improve the landscape and eventually remove all buildings.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--t

WATER INFLUENCE ZONE

W-10 Duchesne Tunnel Housing

Management Decisions

1. Improve the landscape.
2. Continue use of west dwelling for guard station.
3. Maintain all Forest Service buildings to high standard.
4. Encourage Provo River Water Users to remove their building or maintain to a higher standard.
5. Remove all Forest Service buildings when new administrative headquarters are provided.
6. Return area landscape to near original condition.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--u

WATER INFLUENCE ZONE

W-11 Beaver Creek Administrative Site

Description

This site is visible and near the Mirror Lake Highway about eight miles east of Kamas. In 1912 the Forest Service established a tree nursery here. It was closed in 1918. A warehouse and two adjoining fenced areas were left for administrative purposes. Since then the District has used the warehouse for storage and the fenced areas for government horse pasture. In 1962 a protective high wire enclosure was constructed enclosing the warehouse and providing additional space for other buildings, equipment and material storage. A horse corral and "fly" shed were also constructed. Wasatch N.F. Engineering moved in an additional building and have since used the site to store trailers, culvert and other material. Buildup in the District workload makes it necessary to use the site for storage. Use of the horse pasture is very essential. A concerted effort is made to keep the storage area well maintained and orderly. It does not harmonize with the scenic surroundings. An area about one-fourth mile southeast of the present site is screened from the highway and stream, and is a suitable storage area. The horse pasture fence could be replaced. The management objective is to esthetically improve the site.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-11 Beaver Creek Administrative Site

Management Decisions

1. Consider moving warehouse, other buildings and high fence to new screened site.
2. Maintain to high standard.
3. Consider plantings to screen area from highway.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--w

WATER INFLUENCE ZONE

W-12 Administrative Sites

Description

There are three of these sites within the National Forest Boundary and one in Kamas. They are the Mirror Lake, Soapstone, and Smith Morehouse Guard Stations and the Kamas Ranger Station. They were all constructed following standard Forest Service designs and on sites with approved plans. Construction was during the 1930's with additions to the Kamas office and dwelling in 1959 and 1963. The guard stations were constructed with log siding and stained natural. All buildings at the Ranger Station are standard siding and painted white. Landscaping, whether natural or artificial, is pleasing. The general public visits all stations in large numbers. The District generates nearly a million visitor hours. The Kamas Ranger Station office is exposed to a large number of these. The office, warehouse type buildings and lot are small and are not adequate for the present staff or storage needs. The station does not present the best image to the public because of size, shape and color. Limited space restricts presentation of attractive I&E displays. The Mirror Lake Guard Station has inadequate housing. Presently, three forestry aids and families are stationed there during summer months. Two of them live in old house trailers on the outskirts of

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-12 Administrative Sites

Description (continued)

the campground. The life of the trailers is limited. Recreation pressure will continue to make it necessary to house three families here. The management objectives are to present a pleasing and attractive appearance to the visiting public, provide public service, and provide proper housing and facilities to personnel.

Management Decisions

1. Require high standard maintenance at all stations.
2. Construct an attractive I&E display in front of the Kamas Office.
3. Replace or reconstruct the Kamas Office to obtain more space and provide better service.
4. Construct adequate housing and facilities at all administrative sites.

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--y

WATER INFLUENCE ZONE

W-13 Trial Lake Lodge and Summer Homes

Description

There are two summer homes on the southwest shore of Trial Lake and an old lodge on the south shore. The homes and lodge are on opposite ends of the reservoir dam. They were constructed at about the same time as Trial Lake Dam. Construction material is hewn logs and chinking. The lodge building was first used as housing for the caretaker of several reservoired lakes in the vicinity. Later, to justify its location, a special use permit was issued and the caretaker supplied simple services to the public. Many years after the dwellings were constructed, special use permits were issued. For many years these structures presented little or no management problems. The buildings are now old, difficult to maintain, and present an unattractive sight. Public use in the Trial Lake area is now so great that use of the homes and lodge are no longer compatible with recreation values. Conflict and vandalism occur quite frequently. Trial Lake reservoir is scheduled for stabilization under the Central Utah Project, and recreation use should continue to increase. New developments are needed. The caretaker of the reservoired lakes no longer needs the lodge for housing. The special use covering it has expired, and a new permit is denied. The management objective is to return the area to a near-natural condition for future public use.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

344--z

WATER INFLUENCE ZONE

W-13 Trial Lake Lodge and Summer Homes

Management Decisions

1. Deny further special use permits.
2. Place summer home owners on an occupancy tenure, and require them to vacate at end of tenure.
3. Remove or destroy all buildings.
4. Landscape area not needed for public improvements to return to near-natural condition.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--z.1

WATER INFLUENCE ZONE

W-14 Highway Borrow Areas

Description

These units are found near the Mirror Lake Highway, and were used for fill material during the highway construction. Parts of them are screened from the highway, but other parts are visible. They are accessible for public vehicle travel and parking. While vegetative cover in some borrow areas has returned and is progressing, other parts are bare and present a shabby, unattractive view. It is desirable to improve the esthetic values of these borrow areas.

Management Decisions

1. Clean up areas where necessary.
2. Seed bare parts with suitable grass.
3. Plant pine or spruce tree seedlings.
4. Barrier to prevent public travel or parking.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-15 Reservoir and Reservoired Lakes

Description

There are seventeen reservoir and reservoired lakes in the zone. All of them were established by 1940, but some were dammed many years before. They are scenically located and have high recreational and water storage value. Most of them are easily accessible to the public, with the heavier used ones being near the Mirror Lake Highway or Smith-Morehouse road. The fishery potential is good, but water drawdown limits fishing to a very short season. The annual fluctuation and drawdown leaves lake shores and dam areas ugly, with mud bars, stumps and deadwood debris. Many outlets and spillways are now in poor condition. Special use permits are issued for all reservoirs and reservoired lakes. Permit stipulations with respect to maintenance, cleanup, and sanitation, have not always been met. There are minor leaks through or near some dams, most of which have been there many years. Drainages from these reservoirs lead through and to valuable downstream lands, resources and communities. Most of them are scheduled for stabilization and development under the long-range Central Utah Project. Replacement water storage will be downstream and off the Forest. This process will restore esthetic values, improve the recreation potential, and provide greater public safety. These, then are the management objectives.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--z.3

WATER INFLUENCE ZONE

W-15 Reservoir and Reservoired Lakes

Management Decisions

1. Require strict compliance with Special Use Permit stipulations.
2. Secure better dam and reservoir repair, maintenance, cleanup, and sanitation.
3. Stabilize reservoir and reservoired lakes.
4. Provide recreation improvements as needed and in balance with fisheries resource.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. B. St. John — Forest Supervisor — 8/13/69 (Date)

344--z.4

WATER INFLUENCE ZONE

W-16 Recreation Overflow Areas

Description

These units are desirable undeveloped areas receiving heavy public use. This uncontrolled use is destroying esthetic values and damaging the resource through vehicle plant trampling, soil compaction, excessive campfires, tree mutilation, and improper sanitation. Nine of these areas are considered suitable for recreation overflow purposes. Deferred use for six of them is desirable and these should be indefinitely barred from public vehicular use. The Smith-Morehouse, Spike and North Shady Dell areas readily lend themselves to immediate public use overflow purposes. During peak visitor days the main developed recreation areas are often filled to over-capacity. The management objectives are to protect these undeveloped areas and provide continuing units for overflow purposes.

Management Decisions

1. Barrier all units.
2. Provide minimum water and sanitation in the Smith-Morehouse, North Shady Dell and Spike units.
3. Provide control gates and adequate signing at the Smith-Morehouse, North Shady Dell and Spike units.

L.J. Colton — District Forest Ranger — 8/1/69 (Date)

C. P. St. John — Forest Supervisor — 8/13/69 (Date)

344--z.5

WATER INFLUENCE ZONE

W-17 Provo River Flood Damage Area

Description

This unit is located along the Provo River bottom from the Duchesne Tunnel West Portal for about nine miles to the Forest Boundary. Several times since completion of the tunnel in 1952, high water from the North Fork of Duchesne has been let through the tunnel into the Provo River at or near high water peak. River channels were changed often and quite radically. Parts of the Soapstone Campground were flooded or destroyed. Side stream culverts and bridges were damaged. River banks were cut into in many places, toppling trees and shrubs into the stream. Flat treeless areas have been inundated. Large deposits of sand, gravel, and tree and brush debris are scattered throughout the damaged area. Soapstone and Lower Provo Campgrounds and parts of the YMCA are still threatened. The Provo River Soapstone Road Bridge is threatened. A very valuable river fishery has practically been destroyed. In the early 1960's the Bureau of Reclamation constructed dikes above the Shady Dell and Soapstone Campgrounds, and above the Soapstone Road Bridge, to protect these improvements from further damage. The Bureau financed reconstruction of parts of the Soapstone Campground. Periodically, the Forest Service has constructed sand, gravel and rock embankments along

L.F. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

WATER INFLUENCE ZONE

W-17 Provo River Flood Damage Area

Description (continued)

the river and near improvements to keep the river in its main channel. This problem is of such importance that high level meetings between Forest, Bureau of Reclamation and Provo River Water Users, have been held several times, working toward a possible solution. Hydrologists from the R.O. and members of the Forest Supervisor's staff are working on the problem. The main management objective is to work out a means of delivering Duchesne Tunnel and Provo River channel with required volume and at a time to do the least damage. Other objectives are to repair damage, restore river bottom esthetics and restore the fishery. A considerable portion of the bottom area is involved in a reclamation withdrawal.

Management Decisions

1. Encourage joint Forest Service - Bureau of Reclamation study to establish natural hydrolic characteristics of the channel and determining pre and post conditions and changes.
2. Designate, on the basis of present and future land use needs, those areas of National Forest Land needing priority protection and gratifying tangible and intangible values inasfar as possible.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

344--z.7

WATER INFLUENCE ZONE

W-17 Provo River Flood Damage Area

Management Decisions (continued)

3. With the Bureau of Reclamation, jointly prepare a work plan outlining the objective and scope of a survey designed to provide alternatives of treatment measures, effectiveness and estimated costs.
4. Institute the work plan after mutual approval within respective agency authorizations and limitations.

L. J. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

TRAVEL INFLUENCE ZONE

TRAVEL INFLUENCE ZONE

Description

This zone comprises less than one percent of the District acreage. Much of the District that falls in the Water Influence Zone would normally be found in the Travel Zone if public travel were not so heavily influenced by streams and lakes. It consists primarily of secondary roads and adjacent areas. The zone includes a wide variety of soil types and conditions. Inherent erosion hazard varies from low to high. Tree and herbage productivity potential varies greatly.

This zone is quite heavily used for deer hunting, grazing, timber sale activities, mining activities including "Rock Hounds", sightseeing and related recreational activities, and administrative purposes. Much of the use is traveling through for resource use in other zones. This zone is primarily a travel corridor through the Lower and Intermediate Zones. Some trailheads are located in this zone. Its value will remain high and possibly increase in the activities listed above.

General Management Decision

1. Stabilize soil on roads and trails.
2. Consider esthetics, landscaping and environmental control in all activities.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)

TRAVEL INFLUENCE ZONE

T-6 Domestic Water Sources

Description

There is only one domestic water source in the Travel Influence Zone. This management unit is located south of the Soapstone Guard Station. The water source is a spring and serves the Guard Station and Soapstone Y.M.C.A. Camp Roger. This camp provides facilities and services for approximately 1500 people from June through September. The unit is within a sheep grazing allotment, and near areas of public use and travel. The water system is checked bi-weekly for purity during the period of use. The management objective for this unit is to protect the water source from contamination.

Management Decisions

1. Enclose immediate collection area.
2. Prevent contamination from surface runoff.
3. Prohibit unauthorized entry of collection area.
4. Meet State of Utah sanitary protection standards.
5. Coordinate immediate area use with other resource use.

L.K. Colton — District Forest Ranger — 8/1/69 (Date)

C. R. St. John — Forest Supervisor — 8/13/69 (Date)